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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,335	09/28/2001	Jacques Mallet	ST 98036-US-PCT	3243

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ROSS J. OEHLER
AVENTIS PHARMACEUTICALS INC.
ROUTE 202-206
MAIL CODE: D303A
BRIDGEWATER, NJ 08807

EXAMINER	
AKHAVAN, RAMIN	
ART UNIT	**PAPER NUMBER**
1636	

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Applicant 06/23/04

Office Action Summary	Application No.	Applicant(s)	
	09/831,335	MALLET ET AL.	
	Examiner	Art Unit	
	Ramin (Ray) Akhavan	1636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 May 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,9 and 15* is/are rejected.

7)☒ Claim(s) *5-8,10-14 and 16-19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01/02/2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-19 are currently pending and under consideration in this action. Claims 5-8, 10-14, 16-19 have been withdrawn from consideration (*See infra*, under Claim Objections).

Priority

Applicant's claim for priority to PCT/FR99/02752, filed 11/09/1999, and application 98/14080 (France) filed 11/09/1998, as claimed in the Application Data Sheet (ADS), is acknowledged and accepted. Applicant should amend the first line of the specification to make proper reference to these applications.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Applicant should amend the specification to incorporate the section headers outlined above where applicable.

In addition, the disclosure is objected to because of the following informalities: The description for Fig. 6 (Spec. page 31) recites subparts A-D. However, Figure 6 lacks such references altogether. Appropriate correction is required.

Sequence Compliance

Figure 6 discloses sequences that are not properly identified with sequence identifiers (i.e. "SEQ ID NO:"). Sequence Listing, See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. In addition, on page 35 of the specification sequences are disclosed. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02. If said sequences were originally submitted in both electronic and paper format, then applicant is only required to make proper amendment to the Brief Description of the Drawings (i.e.

with proper sequence identifiers) or specification. However, if applicant has not previously submitted said sequences, then a new submission is also required (i.e. CD-ROM/CD-R, Paper Copy, Attorney Declaration).

Claim Objections

All claims: Claims lack an article (e.g. "The" or "and") and thus do not read as a complete sentence, as is required in U.S. practice. It would be remedial to amend the title of the claims section to read "We claim:" or "What is claimed:" and to include an article (i.e. "A" or "The") at the beginning of each claim.

Claims 5-8, 10-14 and 16-19 are objected to under 37 CFR 1.75(c) as being in improper form because each is improperly multiply dependent. See MPEP § 608.01(n). For example, claim 5 is dependant from claim 4, which itself is dependant from any of the "preceding claims". The other objected to claims suffer the same defect. Accordingly, the claims have not been further treated on the merits.

Claims 3, 5 and 9 are objected to because of the following informalities: the claims recite acronyms without properly defining the corresponding meaning (i.e. UMS, PGK, DHFR, EF1a and tetOp). Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. **Claims 1-4, 9 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention**.

Claim 1 is unclear as written because it recites that a first and second region are under control of a "moderate non-viral promoter" and a "tTA-sensitive promoter". The claim's metes and bounds are indefinite because as written it is vague whether there are two separate promoters or a single promoter. For example a tTA-sensitive promoter could be "non-viral". In addition, claim 2 recites the term "transcriptional interference" when referring to a third region separating the first and second region as articulated in base claim 1. In addition, the term "moderate" is unclear and vague, thus making the claim's metes and bounds indefinite. The disclosure indicates that this region comprises a transcription terminator, preferably an upstream mouse sequence (UMS). (Spec. p. 8, l. 25). The UMS sequence has been shown to behave as a transcription terminator. However, as written the claim language is vague and indefinite, thus making unclear the claim's metes and bounds. More particularly, it is unclear from the term "preferably" whether the limitation is drawn to any terminator including "UMS" or only "UMS". If the former interpretation were made, then any terminator would read on this claim (assuming other limitations are met).

Furthermore, all claims merely recite "nucleic acid" or "nerve cell", without any qualification or characterization. The recited "nucleic acid" or "nerve cell" can be in an *in vitro* environment. However, it could also be in an *in vivo* environment. It is unclear what applicants are claiming because if *in vivo*, the cell would be a part of the animal or human, i.e. are applicants claiming the nucleic acid or cell within an animal or human, or the entire animal or human containing the cell, as the cell is part of the host organism? As written the claims are indefinite. It would be remedial to include "An isolated" or "The isolated" before cell or nucleic acid to clarify the metes and bounds of the claim.

In addition, claims 3 and 4 are vague and indefinite because they recite the term "preferably" which is a subjective term open to interpretation, thus the claims' metes and bounds are indefinite.

Claim 9, part c recites the limitation "the UMS sequence". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Bujard et al. (US 5650298; see whole document; hereinafter '298 patent).

The claims are drawn to any nucleic acid occurring in any cell (*See supra*, under §112, ¶ 2 rejection), where a first region encodes a tetracycline operon transactivator, a second region comprises a nucleic acid of interest under control of a tetracycline sensitive promoter, where both regions are arranged in the same orientation. Further limitations are drawn to a third region placed in between the first and second, where the third region restricts transcriptional interference; preferably this region is a "UMS" sequence (i.e. claim 3). Claim 3 is interpreted as broadly as reasonable considering the open language used (comprising and preferably). Thus any terminator would read on this limitation.

The '298 patent teaches a tetracycline-regulated expression system to be inserted into a eukaryotic cell by means of homologous recombination. (e.g. Abstract, Fig. 13A, col. 5, ll. 1-25). The tetracycline regulated system is thus under spatial and temporal control of the target gene promoter, such as the β-actin promoter. (e.g. col. 23, l. 2). A transcriptional terminator is located downstream (e.g. Figs. 13A-B), after which in the same orientation is a gene of interest under control of a minimal phosphoglycerate kinase (PGK) promoter (Id.). Furthermore, the construct comprises a third region, which is arranged in between which restricts transcriptional interference, e.g. tTA transactivator. (Id.). Therefore, the '298 patent anticipates the rejected claims.

3. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Jackerott et al. (J. Histochem. & Cytochem. 1997; 45(12):1643-50).

The claim is drawn to any nerve cell. Any manipulations therein are of little moment with respect to patentability, because the claim is a product-by-process type claim. Therefore when a reference teaches a product that appears to be the same or an obvious variant of the product set forth in a product-by-process claim although produced by a different process, then said reference anticipates the claim. *See In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983); *See also*, MPEP § 2113.

Jackerott teaches nerve cells. (e.g. p. 1646, Fig. 2). Therefore Jackerott anticipates the rejected claim. As such the reference teaches a nerve cell and how the nerve cell is genetically modified is of little moment. The claim is drawn to any nerve cell. Any manipulations therein are of little moment with respect to patentability, because the claim is a product-by-process type claim. Therefore when a reference

teaches a product that appears to be the same or an obvious variant of the product set forth in a product-by-process claim although produced by a different process, then said reference anticipates the claim. *See In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983); *See also*, MPEP § 2113.

Conclusion

Claims 5-8, 10-14, 16-19 have been withdrawn from consideration (*See supra*, Claim Objections). No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramin (Ray) Akhavan whose telephone number is 571-272-0766. The examiner can normally be reached on Monday- Friday from 8:00-4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Remy Yucel, Ph.D. can be reached on 571-272-0781. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GERRY LEFFERS
PRIMARY EXAMINER